United Nations COPUOS/T.439

Committee on the Peaceful Uses of Outer Space

Unedited transcript

439th Meeting
Thursday, 5 June 1997, 3.30 p.m.
Vienna

Chairman: Mr. RAO (India)

The meeting was called to order at 3.45 p.m.

The CHAIRMAN: I now declare open the 439th meeting of the Committee on the Peaceful Uses of Outer Space. This afternoon we will continue our joint consideration of agenda items 7 and 9. While keeping open agenda item 9(b), on preparations for UNISPACE III, we will try to conclude our consideration items 7 and 9(a). We will also continue and conclude our consideration of agenda item 8.

We will begin our consideration of agenda item 10, "Spin-off benefits of space technology", and item 11, "Other matters". I would therefore urge all delegations wishing to speak on any of these remaining agenda items to inscribe their names on the list of speakers as soon as possible.

Report of the Scientific and Technical Subcommittee on the work of its thirty-fourth session (cont.)

Implementation of the recommendations of UNISPACE 82, as well as Preparations by the Preparatory Committee for the United Nations Third UNISPACE Conference (cont.)

The CHAIRMAN: The first speaker on my list is the distinguished representative of the Czech Republic.

Mr. L. PEREK (Czech Republic): I apologize for making a second intervention on the subject of space debris, but my delegation would like to react to the statement made this morning by the Russian delegation. We also share the impression that there was not sufficient time, during the recent session of the Scientific and Technical Subcommittee, to discuss the technical report on space debris, although the experts and staff of the Office for Outer Space Affairs made a great effort to prepare it in time.

My delegation therefore supports the proposal made by the Russian Federation to request the Chairman of the Subcommittee to invite Member States to cooperate in the preparation of the report during the inter-sessional period. The IADC should also be invited to participate in this process. Every effort must be made to maintain the high quality of presentation of scientific and technical reports; this is the only way the report can do full justice to the excellent technical presentations made during the last session of the Subcommittee. In addition, the Subcommittee might wish to take the issue of space debris as the first substantive item on its agenda in order to provide sufficient time for the drafting group to finalize the report.

The CHAIRMAN: Are there any other delegations wishing to speak on these agenda items at this time? I give the floor to the distinguished representative of Germany.

Mr. G. FULDA (Germany): I would like to make a spontaneous comment at this point. So far only one or two delegations have spoken in favour of inter-sessional consultations; my delegation is not yet convinced of the wisdom of holding such consultations.

The CHAIRMAN: I now give the floor to the distinguished representative of the Republic of Korea.

Mr. SUNQ JOO CHOI (Observer, Republic of Korea): My delegation would like to express its appreciation to the Chairman of the Scientific and Technical Subcommittee, Professor Rex. We are pleased to note the progress achieved at the last session of the Subcommittee, particularly as concerns space debris and preparations for UNISPACE III.

Concerning space debris, remarkable progress has recently been achieved. The multi-year workplan which

was adopted at the Subcommittee's thirty-second session has led to substantial discussion of this important topic. The technical report on the modelling of the space debris environment and risk assessment is a useful document which could serve as the basis for future discussion of this issue.

Space debris affects space and the environment, as well as the safe operation of spacecraft in orbit. Therefore, COPUOS must urgently address this matter. As part of our contribution to this problem of global concern, my delegation made several proposals at the last session of COPUOS. Due to the global nature of the space debris problem, COPUOS must cooperate with the space-faring nations to find a solution.

As my delegation suggested at the last session of the Subcommittee, a dual approach is necessary to resolve this issue. In the short term, the Committee should study the various aspects related to space debris in accordance with the multi-year workplan, including debris measurement techniques, the mathematical modelling of the debris environment, and measures to mitigate the risks caused by space debris. At the same time, COPUOS should consider the establishment of an international fund for space debris to help reduce its generation on a long-term basis.

As space debris represents an environmental issue, the principle of common but differentiated responsibilities could be applied to it in the future. My delegation feels that space debris is a subject which should also be discussed within the Legal Subcommittee, and we share the view expressed by the representative of the ILA that exchange of information on this important issue should take place between the two Subcommittees. My delegation suggests that space debris should be added as an item on the agenda of the Legal Subcommittee at the earliest opportunity, at latest upon completion of the current multi-year workplan.

Turning to the use of nuclear power sources in outer space, my delegation is pleased to note that, in cooperation with the IAEA, some progress has been achieved to consider a possible revision of the relevant Principles, due account being taken of the Convention on [Identification?] of Nuclear Accidents and the Convention on Assistance in the case of Nuclear Accidents or Radiological Emergency. Since revision of the current Principles will take some time, those States making use of nuclear power sources in outer space should conduct these activities in full accordance with the current Principles. At the same time, Member States are invited to report to the Secretary-General of the United Nations on a regular basis on national and international research concerning the safety of space objects with nuclear power sources on board.

As concerns UNISPACE III, my delegation would like to thank the Office for Outer Space Affairs for all the preparatory work carried out, and welcomes the results of the thirty-fourth session of the Scientific and Technical Subcommittee concerning the holding of the Conference. We would propose that COPUOS endorse the recommendations of the working group on the objectives, form, venue, date, participants, provisional annotated agenda, financial aspects and additional components. UNISPACE III should be seen as an occasion for the international community to discuss not only the promotion of international cooperation and sharing of the socio-economic benefits of outer space, but also to consider what humanity can do in order to make optimal use of space in a sustainable manner in the twenty-first century.

Outer space is the last frontier of mankind, and we should therefore establish a legal regime to govern its orderly and sustainable use for future generations.

The CHAIRMAN: Are there any other delegations wishing to address these agenda items at this time, or later? I see none. We have thus concluded our consideration of agenda items 7 and 9(a). Agenda item 9(b) will remain open for discussion until tomorrow.

Report of the Legal Subcommittee (cont.)

The CHAIRMAN: The first speaker on my list is the distinguished representative of China.

Mr. HUANG Huikang (China) (*interpretation from Chinese*): On behalf of my delegation, I would like to extend our congratulations and thanks, through the Chair, to the Chairman of the Legal Subcommittee, Mr. Mikulka. Under his able guidance the Legal Subcommittee made positive progress at its thirty-sixth session, as reflected in its report. My delegation appreciates the results achieved, and has several comments to make on the report itself.

This year marks the thirtieth anniversary of the Outer Space Treaty. Over the past 30 years, under the guidance of this Treaty, the Legal Subcommittee has made major achievements regarding the review of legal matters concerning the peaceful exploration and use of outer space, the formulation of international conventions and principles, and the establishment of the international legal order in space. The most recent example is the declaration on international cooperation in space, adopted at the last session of the General Assembly.

However, one must not conclude that the historic mission of the Legal Subcommittee has come to an end or been completed, or that its work can be reduced. With the rapid development of space science and technology, and the intensification and expansion of human activities in space exploration and use, new legal issues are emerging which require elaboration of new principles and legal provisions. As for the existing outer space treaties, principles and other legal instruments, there is also a need for their review and revision in the light of changing circumstances which are emerging. The role of the Legal Subcommittee must therefore not be weakened or diminished.

Regarding the examination and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, my delegation supports the recommendations of both the Scientific and Technical Subcommittee and the Legal Subcommittee. At the present time there is no need to revise and supplement these Principles. Discussion on this matter should be suspended for another year in the Legal Subcommittee, to allow the results of deliberations in the Scientific and Technical Subcommittee to be made available. The item should none the less be kept on the agenda of the Legal Subcommittee as a priority item in order to maintain a legal interest therein, and the Principles should accordingly be revised when new developments so warrant.

As concerns the definition and delimitation of outer space, this item has been on the Subcommittee's agenda since 1967. How to continue consideration of this item has become a matter of increasing concern to many delegations. The Chinese delegation shares the view of some delegations that the definition of outer space and the demarcation between outer space and airspace is a question that cannot be side-stepped in the field of the exploration and use of outer space. Legal regulation is necessary and consideration of this item should not be discontinued simply because views on it vary among Member States. My delegation supports continuing and patient discussion of this subject.

Turning to the question of the geostationary orbit, my delegation believes that as the geostationary orbit is a limited natural resource, how to ensure its equitable economic use through legal regulation, how to accommodate the interests of all States, particularly the developing countries, and how to harmonize this with the relevant procedures and regulations of the ITU are all issues which merit further consideration. The ITU World Radiocommunication Conference will take place in Geneva in October-November this year, and some delegations have suggested using this occasion to put forward a request to the ITU and its Member States to ensure equitable access to the geostationary satellite orbit and radio frequency spectrum resources.

My delegation welcomes the draft resolution prepared by Germany and endorses the proposal that the above-mentioned request be put to the ITU and its Member States. However, as a matter of principle, we are not in favour of any linkage between the adoption of this draft resolution and conclusion of consideration of the item on the geostationary orbit. Discussion of this issue within COPUOS is not in conflict with the role of the ITU; rather, they are mutually complementary. My delegation therefore supports continued consideration by the Legal Subcommittee of the related legal issues on the geostationary orbit.

The fifty-first session of the General Assembly having already adopted the declaration on international cooperation in outer space drafted by the Subcommittee, thus bringing to an end the consideration of the agenda item on space benefits, the need for a new item to be added to the Subcommittee's agenda is more important than ever. My delegation supports the inclusion of the new item on "Review of the status of the five international treaties on outer space", and discussion should continue regarding other new items for possible inclusion on its agenda.

My delegation appreciates the efforts and results of the Legal Subcommittee over recent years aimed at improving its working methods and supports all reform measures which will lead to further improvements.

The CHAIRMAN: The next speaker on my list is the distinguished representative of Argentina.

Mr. O. BEBAGLIATI (Argentina) *(interpretation from Spanish)*: As has already been stated by other delegations, this year marks the thirtieth anniversary of the adoption of the Outer Space Treaty. This has been the single most important contribution of this Committee in the field of space.

Six years before the Treaty was adopted, the former Soviet Union sent the very first human being into orbit in outer space. In a comparatively short space of time, the international community as represented within the United Nations was able to adopt this landmark document, with a major contribution from the legal bodies which were addressing that issue.

In 1968, the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space was adopted.

Therefore in the comparatively short period of time since space activities were first begun we have adopted major international instruments which are still current today and have been ratified by many Member States.

Subsequently, at a somewhat slower pace, the Convention on International Liability for Damage Caused by Space Objects was adopted in 1972, and in 1975 an agreement which is inextricably linked to this document was adopted, the Convention on the Registration of Objects Launched into Outer Space. In 1979, the Agreement Governing the Activities of States on the Moon and other Celestial Bodies was adopted, which has to date received only a low number of ratifications. No further conventions have been adopted since 1979, a period of some 20 years.

That codifying momentum in space law was something that has been lost. Many legal issues in this area are still outstanding, within both the Legal Subcommittee and the General Assembly. The Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting were adopted in 1982, followed by adoption of the Principles Relating to Remote Sensing of the Earth from Space in 1986. However, Member States were no longer in a position to adopt conventions, and so "soft law" was envisaged at that point in time: principles which were the expression of legal standards and norms but which were not conventions.

To put this in a concise manner, Member States and the space-faring nations did have a certain momentum during the first years of activities in space. Certain rules were established which could be universally accepted. But since that early momentum, the pace has slowed; many States believe that those are years where activities in terms of the legal aspects of space activities slowed considerably. The "rules of the game" were established at the outset, but since then other problems and issues have led to a situation where that momentum has been lost.

What is stated above is not an attempt to paint a grim picture: on the contrary. We would like some thought to be given to the need for revitalizing our input in both the Legal Subcommittee and the Committee itself, in order to keep to a certain standard in what earlier was an overriding concern to develop legal provisions in the field of outer space. This process of revitalization must meet with the required consensus from all Member States, those with major interests in space and those with lesser interests.

As concerns the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, the Legal Subcommittee is as yet unsure whether or not to address this important issue. Input from the Scientific and Technical Subcommittee is necessary, but this process takes time. However, the subject must be addressed before any adverse impacts materialize. At present the Subcommittee has one main topic on its agenda, which is split into two sub-topics. The Mexican delegation proposed a new item which has now been adopted, and which has encouraged my delegation to make the above statement.

Defining outer space is not an easy matter, but as has already been stated by the distinguished representative of China, it cannot be ignored. We need to take whatever measures are necessary to come to some understanding within a reasonable period of time. One specific problem concerns the legal aspects relating to aerospace objects. In terms of the definition of outer space itself, this is one item where some progress might be achieved in the foreseeable future, in particular in discussions next year within the Legal Subcommittee. Member States have responded to the questionnaire circulated by the Secretariat, who have analysed the replies received. These are contained in another document which makes a valuable contribution to consideration of this subject. An in-depth analysis is now required within the Subcommittee, and my delegation will make comments on this at the appropriate time.

At the initiative of the Mexican delegation, an item was taken up which is of major importance. This is not merely a review of the texts currently in force, but also includes consideration by each delegation of the implications of treaties and compliance with them. It is not intended to revise or amend these treaties, as stated in the report of the Legal Subcommittee. The interest displayed by Member States in terms of implementation of and compliance with the Principles merits further analysis, although revision of the Principles is not necessary at this stage. Rather, new elements should be introduced into the legal order.

The Legal Subcommittee also held informal discussions on other possible topics for inclusion on the agenda. My delegation welcomes all the issues proposed which represent major scope for the work of the Subcommittee. The issue of space debris is a serious one, and the link between space activities and the environment is equally important. Much still remains to be done on the legal aspects of outer space, and we should not neglect this if we wish to rekindle that initial spirit which prevailed in 1966. The Subcommittee should

bear this in mind when preparing standards and norms in the field of space law.

As concerns the use of the geostationary orbit, two contributions have been made: firstly, the proposal by Colombia in 1996, and the document prepared by Germany this year. My delegation expresses its appreciation for both of these initiatives, and feels that the proposal by Colombia has not been examined in sufficient detail. The Legal Subcommittee may wish to give more in-depth consideration to this proposal at its 1998 session, in order to recommend an appropriate course of action.

The proposal put forward by Germany represents a valuable contribution to the Subcommittee's work. This document has been revised on two occasions, and further revision is also possible, as certain countries may not yet have had the opportunity to study it in detail. Other issues not directly concerned with satellite communication but which are concerned with the use of the geostationary orbit merit further attention from the Legal Subcommittee. We must therefore pursue our analysis of this item within the Subcommittee, and subsequently within COPUOS.

As concerns aerospace objects, my delegation believes that those States which have not yet done so should reply to the questionnaire circulated by the Secretariat. Those countries which have already responded may indeed wish to supplement their replies in view of new information which has come to light. The Secretariat could then prepare an update of the report based on this information.

Regarding the proposed new agenda item and the Mexican initiative, my delegation hopes that this will enable us to draw on all the work carried out both in the Legal Subcommittee and in COPUOS. Subject to the agreement of the Committee, the Secretariat might ask Member States to provide information on their experience of the five treaties in question, and other related issues such as those sets of principles not specifically mentioned but which nevertheless have an impact for Earth observation and direct satellite broadcasting.

In conclusion, as concerns revitalizing our thinking and our contribution to space law, informal contributions are the most appropriate way of achieving this. My delegation proposes that this approach be adopted whenever appropriate in the Legal Sub-committee, taking due account of the possibility of holding informal consultations during meetings of COPUOS. Various matters could be considered, for example legal aspects relating to certain issues which specific delegations may wish to discuss.

My delegation believes that exchange of information and initiatives is indispensable to the achievement of progress in this direction. Without substantive discussion of the items on the Sub-committee's agenda, we will continue to exchange views and information but we will not be complying with our terms of reference as mandated by the General Assembly. In order to fulfil this mandate and renew our efforts, my delegation is ready to cooperate with delegations of all Member States.

The CHAIRMAN: I now give the floor to the distinguished representative of the Philippines.

Ms. M. PADUA (Philippines): My delegation would like to commend the work of the Legal Subcommittee at its thirty-sixth session. Due in large part to the intensive efforts made to improve the working methods of the Subcommittee, positive results were achieved.

My delegation notes with interest the draft resolution proposed by Germany, entitled, "Request to the International Telecommunication Union: Ensuring equitable access to the geostationary satellite orbit". We support the view that COPUOS and its Subcommittees should strengthen cooperation with the ITU. However, the Committee should also continue its work towards the elaboration of a political and legal regime for the utilization of the geostationary orbit, to ensure equitable access to all users. My delegation does not subscribe to the view that the adoption of the draft resolution would imply the conclusion or suspension of the agenda item on this subject.

My delegation therefore recommends that this Committee should continue its discussion on the geostationary orbit, as well as on the proposal by Germany, in order to provide all delegations with the opportunity to examine its merits. The issue of the geostationary orbit is a complex one, as witnessed by the fact that the Legal Subcommittee has not yet agreed on what is to be done vis-à-vis the proposal by Colombia. My delegation believes the Subcommittee's mandate to examine this issue is important, and that sufficient time should be devoted to this subject.

The successful adoption of the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, taking into particular account the Needs of Developing Countries – despite the tedious and lengthy

process leading to its adoption – should provide the impetus and political will for the Committee to pursue its work on this subject. Moreover, the Declaration should serve as a guide for the international community in tackling matters relevant to the use of outer space, including the utilization of the geostationary orbit for the benefit of all countries.

My delegation welcomes the adoption by the Legal Subcommittee of the proposal by Mexico to include a new agenda item on "Review of the status of the five international treaties governing outer space". This should provide the momentum to explore the inclusion of other items for inclusion on the agenda, in particular those dealing with international cooperation.

The CHAIRMAN: The next speaker on my list is the distinguished representative of Spain.

Mr. A. TREJO (Spain) *(interpretation from Spanish)*: My delegation would like to make a brief comment on the draft resolution proposed by Germany. We have studied this document in detail and consider it to be an excellent proposal which we fully support. Some difficulties do exist concerning the removal of this item of the Subcommittee's agenda, but my delegation believes efforts should be deployed to enter into negotiations. In that way, with a spirit of compromise we might reach an agreement which would enable us to adopt the document during the present session of the Committee.

My delegation feels it is important for this draft resolution to be adopted prior to the convening of the World Radiocommunication Conference, and ways and means of achieving this should be given due consideration at the present session.

The CHAIRMAN: I now give the floor to the distinguished representative of Indonesia.

Mr. H. WIRYOSUMARTO (Indonesia): My delegation would like to make a short statement on those subjects which we consider to be the most important.

Concerning agenda item 8, my delegation supports the view expressed by the Group of 77 that all items presently on the agenda of the Legal Subcommittee should be maintained. It is not advisable to remove any item from the agenda until substantive consideration of it has taken place. While we are open to the discussion of proposals concerning the geostationary orbit, this item should nevertheless be maintained on the agenda. My delegation believes that the Subcommittee is the appropriate body of the United Nations to deal with the legal and political aspects of the geostationary orbit.

The CHAIRMAN: The next speaker on my list is the distinguished representative of Cuba.

Mr. H. HERERA CREGO (Observer, Cuba) *(interpretation from Spanish)*: Since this is the first occasion on which my delegation has taken the floor, I would like to express our congratulations to the new members of the Bureau on your election.

The results which emerged from the last session of the Legal Subcommittee were very positive. My delegation concurs with the views expressed by the representatives of GRULAC and the Group of 77, in particular as concerns the geostationary orbit and its continued inclusion on the agenda of the Legal Subcommittee. Under present circumstances, this item should be neither deleted nor suspended from the agenda. It should be discussed together with the definition and delimitation of outer space, in view of the obvious interrelationship between the two issues.

The CHAIRMAN: Thank you for your statement and your kind words addressed to the Bureau. I now give the floor to the distinguished representative of Germany.

Mr. G. FULDA (Germany): At the last session of the Legal Subcommittee, my delegation presented a working paper containing a draft resolution entitled, "Request to the International Telecommunication Union: Ensuring equitable access to the geostationary satellite orbit" (document A/AC.105/C.2/L.207). The aim of this proposal was to reach a constructive conclusion to our considerations on the status and character of the geostationary satellite orbit under agenda item 4.

The working paper reflected the interests of both industrialized and developing countries alike in the equitable access to the orbit/frequency spectrum resources of the geostationary orbit. The draft resolution is addressed to the Member States of the ITU to guarantee equitable access for all States. It is also addressed to the World Radiocommunication Conference of the ITU, to be held in October-November 1997, and which will take far-reaching decisions relating to equitable access to the geostationary orbit. My delegation believes that COPUOS should provide an input to that conference.

My delegation was pleased to note that the draft resolution was well received by many delegations and that, through the constructive support of these delegations as well as the observer from the ITU, the text of

the draft resolution was considerably improved during the meetings of the drafting group. The resulting text (see document A/AC.105/C.2/L.207/Rev.2) is annexed to the Subcommittee's report.

The Legal Subcommittee acknowledged the merits of this draft resolution and agreed that it could form the basis for a consensus at this meeting of COPUOS. In order for the resolution to be presented to the World Radiocommunication Conference, the Committee has to reach an agreement during the present session. Bearing in mind that the text of the draft resolution represents a well-balanced compromise, my delegation calls upon all delegations to adopt the text of the draft resolution. Much effort has gone into forming this compromise text, and COPUOS should take this opportunity to present its views on the important subject of equitable access to the geostationary orbit.

Informal consultations are already taking place between interested delegations. My delegation has asked for the floor at this point in time, although as yet no acceptable result has been achieved, but we wished to try and make the best use of conference facilities. However, during these informal consultations we have been confronted with certain viewpoints which have created considerable irritation in my delegation; it may even prompt us to withdraw our initiative. My delegation will continues its efforts to achieve a consensus resolution, but should these efforts prove unsuccessful, we would ask for the Committee's indulgence to take the floor again under this agenda item.

With respect to the proposal for a new agenda item entitled "Review of the status of the five international legal instruments governing outer space" (document A/AC.105/C.2/L.206), proposed by Mexico, my delegation reiterates its support for this initiative. We are willing to contribute to future discussions on this new agenda item.

Finally, as concerns other subjects for possible discussion in the Legal Subcommittee, in particular the issue of space debris, my delegation's position as explained and presented at our recent meetings remains unchanged. We believe it is premature to contemplate discussion of this issue in the Legal Subcommittee before it has been thoroughly studied in the report of the Scientific and Technical Subcommittee. This relates not only to issues with direct relevance to space debris but also to those which are indirectly closely related with space debris. To date there is not consensus support for such discussion in this Committee.

The CHAIRMAN: I now give the floor to the distinguished representative of Chile.

Mr. A. CELEDON (Chile) *(interpretation from Spanish)*: My delegation would like to explain its position vis-à-vis the subjects under consideration in the Legal Subcommittee.

Firstly, as concerns the approval of a new item for consideration by the Subcommittee on "Review of the status of the five international legal instruments governing outer space", now is an appropriate time to consider this issue as it is 30 years since the Outer Space Treaty was adopted. This new agenda item was a response to a situation which had evolved in the Subcommittee where no further items for consideration existed. Items on spin-off benefits of outer space and the use of nuclear power sources had been successfully addressed by the Subcommittee; this thus opened up a new area for consideration, that of space law. This subject is one which initially had great impetus in the Subcommittee but the pace has gradually slowed down.

The adoption of the new agenda item does not imply that other items may not also be added to the agenda of the Subcommittee. Specifically, my delegation mentioned an item which is a comparative study of space law as related to environmental law. Space debris is another interesting and vital issue which could be considered, and the situation should be monitored to ensure that topics of interest for space law might be discussed within the Subcommittee.

Another important subject is the geostationary orbit. My delegation reiterates what is stated in the report of the Subcommittee, namely that the Subcommittee and the appropriate working group considered the working paper put forward by the German delegation. This was analysed in great detail and subsequently revised. The report clearly states that while this working paper was debated, no consensus agreement was reached. The main issue of concern was whether or not adoption of the draft resolution would lead to removal or suspension of the item on the geostationary orbit from the Subcommittee's agenda, and again no consensus decision was reached. The same is true in the present Committee: we do not have consensus agreement to approve the document.

My delegation reiterates that adoption of the German proposal should not imply completion of consideration of the geostationary orbit in the Legal Subcommittee. We believe that both the German working paper and the Colombian document, when taken together, offer the necessary momentum to continue our

consideration of this subject. We should continue to seek ways and means of achieving consensus.

The CHAIRMAN: I now give the floor to the distinguished representative of Germany.

Mr. G. FULDA (Germany): I ask for your indulgence in asking for the floor again, but I have one particular comment to make after having listened to the views of several delegations on the proposal put forward by my delegation.

Several delegations have spoken against removal of this item from the Legal Subcommittee's agenda. In fact I am not aware of any delegation here present who has specifically requested such removal. The only suggestion discussed was to temporarily suspend consideration of the item. As I mentioned earlier, my delegation will make every effort to find a consensus within the Committee. I hope the majority of delegations will be prepared to participate in these informal consultations, which should address the working paper itself rather than discussion of a situation which does not in fact exist.

The CHAIRMAN: It is clear from our discussions that we do not have a consensus, and therefore further informal consultations are required to try to finalize discussion on agenda item 8. For the time being, it is my intention to close discussion on agenda item 8 in order to allow delegations to continue with further informal consultations, and continue discussion on it tomorrow.

It is so decided.

Discussion on agenda items 9(a) and 8 will continue tomorrow. We will now turn to our discussion of agenda item 10.

Spin-off benefits of space technology

The CHAIRMAN: The first speaker on my list is the distinguished representative of the United States.

Ms. S. KAMM (United States of America): On behalf of my delegation, I have pleasure in giving the Committee details on the spin-off benefits of NASA's space technology, which has recently been commercialized.

The active and productive collaboration between NASA and United States industry has resulted in the development of new and improved products and processes based on space-related research. I will give examples of these spin-off benefits in the fields of health and medicine, transportation, public safety, and industrial productivity.

A telemedicine demonstration project exemplified the collaboration between NASA and US industry in the field of health and medicine. NASA is actively engaged in developing new technologies applicable to both space and Earth telemedicine and in promoting broader acceptance of telemedicine by carrying out demonstrations of the technique's potential, in cooperation with local governments and the medical and industrial communities.

A telemedicine demonstration project for a medically under-served population in the United States, begun in 1995 and planned as a permanent operation, links the University of Texas Health Sciences Center at San Antonio, Texas with South Texas Hospital, which is 250 mils away in Harlingen, Texas. The South Texas area is classified as medically under-served, with a special problem of a lack of physicians and nurses trained in oncologic or cancerous diseases.

The demonstration project provides two-way audio/video linkage; physicians from the University of Texas Health Sciences Center can see and talk with South Texas patients, review laboratory work and consult doctors who provide primary care at South Texas Hospital. They also conduct some 80 hours per month of "teleclinics" and give guidance in paediatric oncology nursing techniques and family counselling. NASA provided funding and expertise for this project, while VTEL Corporation and the Healthcare Open Systems and Trails Consortium provided off-the-shelf computer hardware, networking systems and staff support.

The Dyna Med Anti-Shock Trousers (DMAST) suit, an anti-shock garment, is another example of the medical application of space technology. In 1971 NASA developed a prototype pressure suit designed for haemophiliac children. NASA curtailed the project due to lack of funding, but Zoex Corporation in California continued the development project. This resulted in the DMAST suit, which is currently being distributed exclusively by Dyna Med in California.

There are currently more than 1,000 DMAST suits in use. The DMAST suit reverses the effect of shock on the body's blood distribution by applying counterpressure to the legs and abdomen, returning blood to vital organs and stabilizing body pressure until the patient reaches a hospital. Unlike other pressure suits, the DMAST is non-inflatable and has no tubes, bladders or valves and, consequently, no risk of punctures or leaks. Its simple

one-piece design makes application very rapid (less than 60 seconds) and easy. The DMAST suit has demonstrated its effectiveness in treating shock caused by trauma, complications of pregnancy, ruptured internal organs, severe allergic reactions, brain injury and paediatric emergencies.

In the field of transportation, NASA technology is used in the operation of the first and most advanced Intelligent Transportation System in the United States. This system was started in July 1995 as part of the Transportation Guidance System (TransGuide) in San Antonio, Texas – the tenth largest city in the United States. Allied Signal Technical Service in Maryland developed TransGuide under contract to the Texas Department of Transportation, which incorporates technology developed by Allied Signal under various contracts with NASA.

TransGuide makes the road network intelligent through the application of advanced video, sensor, computer and communications technologies. The system monitors the passage of traffic over sensors embedded in the roadways and detects incidents. Control centre operators are alerted to an accident occurring, and the area of the accident is highlighted on a map display. The deployment of advanced technologies provides San Antonio with a safer, more efficient highway system, enables more fluent traffic flow, reduces auto fuel consumption and emissions, and allows more rapid detection for response to accidents.

NASA's Aircraft Structural Integrity programme, which addresses ways of enhancing the safety of aging commercial jetliners, is developing a variety of devices and procedures for detecting cracks, disbonds and corrosion during routine aircraft service inspections. NASA has invented a device to detect fatigue cracks in aluminum alloy plates. KB Instruments, in Pennsylvania, has commercialized one device, called the "CrackFinder". This is a hand-held electromagnetic probe for non-destructive evaluation, which is a very reliable, low-cost method for rapid scanning of aircraft skins for surface breaks. The technology involves an eddy current, an electrical current induced by an alternating magnetic field. The CrackFinder is affordable, small, easy to use, highly accurate, reliable and needs no calibration.

Space technology continues to improve industrial productivity. NASA uses automated systems for ground processing operations prior to each space shuttle flight to reduce time, lower costs and increase efficiency. However, these automated systems also increase the risk that an errant robot might damage critical flight hardware.

Under contracts to NASA from 1991 to 1995, NASA and Merritt Systems Inc. (MSI) in Florida developed an obstacle detection system to ensure that robots avoid collisions in their workplace. MSI's sensing architecture allows the retrofitting of existing robots with a whole-arm obstacle detection and avoidance system. MSI commercialized the obstacle detection system in 1995, and this comprises a sensorSkin that is wrapped around robots and contains over 1,000 sensors. The associated compact, low-cost smartSensor modules perform analog processing and handle the communications between the module and control computer. Robots which incorporate the MSI sensorSkins and smartSensor technology are now being used in space shuttle processing. The commercial potential ranges from use in robotic manufacturing systems to remote hazardous waste clean-up.

The United States remains committed to the dissemination of space-related technologies to meet the challenges of everyday life. We have provided each delegation to this meeting with a copy of NASA's Spin-off 1996 brochure.

The CHAIRMAN: The next speaker on my list is the distinguished representative of Italy.

Ms. G. ARRIGO (Italy): The present agenda item is strongly linked to the ways and means of maintaining outer space for peaceful purposes, and my delegation would like to mention two projects in the fields of life science and telemedicine.

The increasing number of manned space missions highlights the importance of calculating the biological risks to which astronauts are exposed. The phenomenon of "light flashes" experienced by astronauts since the early space flights is one of the most interesting examples of radiation-induced effects detected on human beings. Recently a group of Italian researchers (INFN), in collaboration with a group of Russian researchers (MEPHI) have built a prototype silicon detector, called SI-eye 1, for an experiment which was carried out on the Russian space station MIR from October 1995 to March 1996.

These researchers are currently working on a more refined version, SI-eye 2, which will be launched within the next few months. It is hoped that these experiments will help to clarify the problem, due to the small geometrical acceptance, addressing only questions related to the particle-retina interactions. That is why

they are now studying a new instrument, ELFO, which will be able to detect and identify incoming particles over a large part of the context, integrated with other systems, with the following aims: a specific assessment of the mechanism which gives rise to the light flashes; full and accurate monitoring at the single particle level of the entire radiation impinging on the human skull; a possible correlation between space radiation and functional responses of the bioelectrical brain activity; and provision of additional information for more accurate dosimetry.

The second telemedicine project, SHARED (Satellite Health Access for Remote Environment Demonstrator), has been a humanitarian experience and a peacekeeping mission developed in both Bosnia and Albania.

My delegation believes that health services are crucial, and these services must be low cost and efficient. In order to reach the developing countries or problem areas (war, natural disaster, etc.), satellites must be used. Satellites can supply various kinds of images for ultrasound as well as audio, management, clinical, epidemiological, literature data, and others. The SHARED programme has been accomplished due to collaboration between the Italian Ministry of Defence, the Italian Space Agency, the European Space Agency and a consortium made up of an international scientific biomedical science park and some Italian industries.

The pilot project is providing health-care services to the Italian field hospital in Sarajevo, linked to the scientific Institute San Raffaele in Milan, and the military hospital Celio in Rome. The communication infrastructure is supplying a multi-point video conference system, which allows medical consultations between the three hospitals, as well as data transfer of X-ray, CT scan, pathology samples and others.

As at December 1996, this project has been operational for some 410 hours. The results achieved during this period include 58 teleconsultations, 60 clinical cases and several training courses for medical personnel of the civilian hospital in Sarajevo. The availability of experts in the various medical disciplines has allowed local medical personnel to improve diagnoses and therapies in as many as 60 per cent of the cases analysed.

The SHARED network is now being extended to cover Albania (Tirana and Valona) and it is foreseen that it will extend to 15 hospitals in European and the Mediterranean basin.

The CHAIRMAN: Are there any other delegations wishing to address this agenda item at this time? I see none. We will thus continue and conclude our consideration of this agenda item tomorrow morning. We will now proceed to agenda item 11.

Other matters

The CHAIRMAN: The first speaker on my list is the distinguished representative of Italy.

Ms. G. VENTURINI (Italy): My delegation would like to make a brief statement concerning the methods of work of the Committee and its subsidiary bodies.

My delegation welcomed the Chairman's package proposal, including items on consensus agreement on the composition of the Bureau, agenda structures and the duration of sessions. We are especially pleased to note the recommendation made that the duration of the Legal Subcommittee's sessions be reduced to two weeks, a proposal we have repeatedly supported in previous years. A further improvement could be made by reducing the duration of COPUOS itself to one week. This would help to clarify its plan of work and enhance its transparency and efficiency.

As concerns the records of the Committee and the Legal Subcommittee, my delegation recognizes that the use of unedited verbatim transcripts greatly contributes to reducing the costs of these sessions. Therefore we believe this practice should be maintained.

The CHAIRMAN: Are there any other delegations wishing to speak on this agenda item at this point in time? I see none. We will therefore continue our discussion of this item tomorrow morning.

You may recall that at this morning's session I informed delegates of the background documentation related to the granting of observer status to the International Space University. If I hear no objections, I propose that this organization be granted permanent observer status with the Committee, in accordance with the agreement of the Committee at its thirty-third session concerning observer status of non-governmental organizations in document A/45/20 (para. 137). It is stipulated therein that these organizations will also apply for consultative status with the Economic and Social Council.

It is so decided.

I would like to briefly recall a matter before us under agenda item 11, the use of unedited verbatim transcripts. As you will recall, starting with its thirty-ninth session and on its own recommendation, the Committee was provided with unedited verbatim transcripts in lieu of verbatim records. Accordingly, the General Assembly requested that the Committee evaluate the use of unedited transcripts at its fortieth session and inform the General Assembly, at its fifty-second session, of the Committee's experience with the transcripts.

The General Assembly also requested the Committee to keep it informed, through the Committee on Conferences, of its experiences with the use of unedited transcripts. To this end the Secretariat has prepared document A/AC.105/1997/CRP.3, which details the Committee's utilization of unedited verbatim transcripts, including a preliminary evaluation by the Secretariat and comparative cost figures of the transcripts in comparison with verbatim and summary records. Are there any delegations wishing to take the floor under this agenda item? Does this mean that the Committee is in agreement that it continue to use unedited verbatim transcripts in lieu of verbatim records?

I give the floor to the distinguished representative of Japan.

Mr. H. AZUMA (Japan): As concerns the use of unedited verbatim transcripts, my delegation appreciates the initiative taken by the Secretariat in this respect as well as the results of the unedited transcripts of the Committee's last session. However, we believe that the Committee should continue to examine whether these transcripts are valuable or not in due course.

The CHAIRMAN: The Committee will continue to use unedited verbatim transcripts, subject to any revisions proposed according to the experience of delegations. I now give the floor to the distinguished representative of the United States.

Mr. K. HODGKINS (United States of America): My delegation would like to support the statement made by the distinguished representative of Japan concerning the transcripts. We also welcome the decision to use unedited verbatim transcripts, which represent a significant cost saving. Our question is whether in future it will be necessary to continue to issue these transcripts.

In document A/AC.105/1997/CRP.3, paragraph 6, we note that the verbatim transcripts of the 1995 session have not been issued in all languages. It also takes up to three months to issue the unedited verbatim transcripts, and my delegation is not convinced that these transcripts are particularly useful considering that we have reports of both the Committee and its Subcommittees. Therefore we would like to keep this question open for next year's session.

The CHAIRMAN: We will continue with the use of unedited verbatim transcripts at present, and review this situation at a later stage.

I will shortly adjourn this meeting of the Committee. Before doing so, I would like to remind delegations about tomorrow's schedule of work. We will continue and conclude our consideration of agenda items 10 and 11; and continue and hopefully conclude our consideration of agenda item 9(b) on preparations for UNISPACE III, and agenda item 8. I hope that the informal consultations taking place in connection with agenda item 8 will achieve some positive progress.

I would propose that we then begin our consideration of the draft report of the Committee at our meeting on Monday morning. The Secretariat has informed me that if possible, all documents will be prepared in time for Monday. Accordingly, it may be possible for us to complete our work on Monday or Tuesday morning, or at least by Tuesday afternoon. Once we have concluded our work on the substantive items on the agenda tomorrow, the remaining time should be allocated to the Secretariat in order for it to complete its preparation of the draft report.

I give the floor to the distinguished representative of Spain.

Mr. A. TREJO (Spain) *(interpretation from Spanish)*: My delegation does foresee a problem in concluding our consideration of agenda item 10 tomorrow. Agenda item 10 had originally been scheduled for discussion on Tuesday, 10 June; one of the experts in my delegation who will be making a statement under this item is due to arrive only on Sunday, 8 June. Would it therefore be possible to allow some 30 or 40 minutes on Monday, 9 June, to conclude our discussion on this item, as it will be impossible for our experts to be here tomorrow.

The CHAIRMAN: The schedule I outlined above was indicative in nature, and in conformity with the Committee's own recommendation that we should make the most efficient use of our time. Of course we understand the situation, and discussion can continue on agenda item 10 on Monday morning before beginning our discussion of the draft report.

Immediately following this Committee meeting, informal consultations on UNISPACE III will be held in Room C-0713 for those delegations interested in taking part in such discussions. I hope there will also be informal consultations concerning agenda item 8 between now and tomorrow afternoon to see if some acceptable solution can be reached. The Committee is now adjourned.

The sitting adjourned at 5.25 p.m.